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09/915,891	07/26/2001	Jonnathan H. Kim	TDCO:006	7295

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/915,891

Applicant(s)

KIM, JONNATHAN H.

Examiner

Isam A Alsomiri

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-16, 20-25, 42-48 and 52-57 is/are rejected.
- 7) ☒ Claim(s) 8-10, 17-19, 26-41, 49-51 and 58-60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 11-15, 20-24, and 52-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Fullerton.** Referring to claims 11, 20, and 52, Fullerton teaches transmitting a radio-frequency pulse in a multipath propagation medium (see col. 4 lines 59-65), receiving a plurality of pulses (see col. 5 lines 8-12), discriminating using a detector, a first pulse in the plurality of pulses from the noise floor (see col. 12 lines 1- 7). Furthermore, it is inherent to have circuits for transmitting, receiving, and detecting.

**Referring to claims 12-13, 21-22, and 53-54,** Fullerton teaches correlating the received pulse with the decode signal to output a baseband signal, which reads on the claimed a correlator circuitry configured to correlate a received signal with a template signal to provide an output signal (see Abstract), a threshold circuitry configured to provide a first pulse signal (see col. 2 lines 36-40).

**Referring to claims 14 and 55,** Fullerton teaches signal tends to indicate the time position of a first pulse (see col. 6 lines 54-60, col. 11 lines 1-5).

**Referring to claims 15, 23-24, and 56,** Fullerton teaches a scanning receiver circuitry (see col. 10 lines 1-7), receiving ultra-wideband signal (see col. 2 lines 29-31).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-7, 16, 25, 42-48, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fullerton in view of Clark et al.** Referring to claims 1 and 42, Fullerton teaches correlating the received pulse with the decode signal to output a baseband signal, which reads on the claimed a correlator circuitry configured to correlate a received signal with a template signal to provide an output signal (see Abstract), a threshold circuitry configured to provide a first pulse signal (see col. 2 lines 36-40). Fullerton does not teach the threshold signal derived from a noise floor, Clark teaches a threshold circuit 210, which is derived from the noise level or the noise floor (see col. 6 line 47 – col. 7 line 3). It would have been obvious to modify Fullerton's system to derive the threshold signal from the noise floor to have the ability to eliminate most of the spurious signals while maintaining a high probability of receiving real signals.

**Referring to claims 2 and 43,** Fullerton teaches the claimed the received signal is received via a multipath propagation medium (see col. 10 lines 54- 57).

**Referring to claims 3 and 44,** it is inherent to have a multiplier circuitry to provide an output signal that comprises the product of the template signal and the received signal (see

Art Unit: 3662

Abstract, col. 2 lines 36-40), Fullerton teaches including an integrator circuit to integrate the output signal (see col. 2 lines 37-40 44-48).

**Referring to claims 4 and 45**, Fullerton teaches a comparator circuitry to compare the output signal with the threshold signal (see col. 12 lines 1-7).

**Referring to claims 5 and 46**, Fullerton teaches signal tends to indicate the time position of a first pulse (see col. 6 lines 54-60, col. 11 lines 1-5).

**Referring to claims 6 and 47**, Fullerton teaches a scanning receiver circuitry (see col. 10 lines 1-7), receiving ultra-wideband signal (see col. 2 lines 29-31).

**Referring to Claims 7, 16, 25, 48, and 57**, Fullerton is silent about whether the threshold signal includes a first number added to the product of a second number and a third number. However, Clark teaches deriving the threshold signal from a noise floor as mentioned above, which reads at least on the claimed first number, the product of the third and second number which is can be zero does not change the threshold value, therefore, having a threshold value reads on the first number added to the product of a second and a third number.

#### ***Allowable Subject Matter***

**Claims 8-10, 17-19, 26-41, 49-51, and 58-60 are objected to** as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Terminal Disclaimer***

The terminal disclaimer filed on December 02, 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 09/915,620, filed July 26, 2001 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Response to Arguments***

Applicant's arguments filed December 02, 2002 have been fully considered but they are not persuasive. Regarding claims 11-15, 20-24, and 52-56, applicant argues: Without a context, such as the context of a specific reference, circuits for "transmitting, receiving, and detecting" are not inherent in a general sense. *Response*; even though Fullerton is silent about having circuits for transmitting, receiving, and detecting, it is inherent that the system have some types of circuits for transmitting, receiving, and detecting. As best understood by the examiner a system that transmits, receives and detect signals must have circuits that do those functions. Applicant argues: Fullerton fails to teach "a detector circuitry configured to discriminate from a noise floor a first-arriving pulse of the plurality of pulses", Fullerton discuss detecting channel coincidence, not first-arriving pulses. *Response*; Fullerton does teach detecting first arriving pulses, "The receiver integrates T samples of the baseband signal and a threshold detector uses the integration results to detect channel coincidence" (Abstract lines 7-9), Fullerton counts the T samples of the baseband signal (which is the first-arriving pulses, see Abstract lines 12-16), which reads on the claimed "a detector... to discriminate from a noise floor a first-arriving pulse of the plurality of pulses". Furthermore, since the received pulses are coming from multipath

Art Unit: 3662

propagation medium (see Fig. 7, col. 10 lines 55-57) it is inherent that the detector detected the T samples (pulses, which includes the first pulse) from a noise floor.

Applicant's arguments with respect to claims 1-7, 16, 25, 42-48, and 57, have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fontana et al. is cited to show an ultra wideband receiver with high speed noise and interference tracking threshold.

Richardson et al. is cited to show a method for identifying signals by comparing the signals with an interference threshold signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Application/Control Number: 09/915,891

Page 7

Art Unit: 3662

Isam Alsomiri



February 24, 2003



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